

REMARKS

Claims 1-28 are currently pending in this application. Claims 25-28 have been withdrawn. Applicant has amended claim 19.

In claim 12, the Examiner objected to the phrase “extending from longitudinal opposite ends of the elongate cutout to one and the other of opposite side surfaces” as being unclear. That phrase can be explained with reference to FIG. 3. As shown in FIG. 3, the ribs 7d and the cutout 22f extend longitudinally (in a vertical direction perpendicular to the dotted line). Also as shown, two grooves 22c for each cutout extend horizontally, one extending to the left at the lower end and the other extending to the right at the upper end of the cutout. In the context of claim 12 and FIG. 3, the “one and the other of opposite side surfaces” refers to the left and right side surfaces of the rib 7d. Accordingly, applicant submits that claim 12 is definite and clear.

In claim 19, the Examiner objected to the phrase “the hollow cylindrical portion” as lacking an antecedent basis. Applicant thanks the Examiner for pointing out an error. The phrase has been amended to “the hollow protruding portion”.

In the Office Action, the Examiner rejected claims 1, 4-6, 14, 16-19, 21 and 22 under 35 U.S.C. Section 103(a) as being obvious over Wilson (US Patent No. 6435638) in view of Olsen (US Patent No. 6158853). Applicant respectfully traverses the rejection.

The Examiner asserted that the outer container 1102 in FIG. 10 of Wilson is equivalent to “an outer bag which is formed of . . . a flexible sheet” as recited in claim 1, but correctly noted that the outer container is not “formed of a . . . flexible sheet”. The Examiner then relied on the Olsen reference to argue that the collapsible outer bag 146 in FIG. 4 of Olsen can replace the outer container 1102 in FIG. 10 of Wilson. Applicant respectfully disagrees.

A person of ordinary skill in the art would equate the outer container 1102 in Wilson to the protective outer shell 148 in Olsen, not to the collapsible outer bag 146 in Olsen because they are both rigid casings to protect the ink bags. Thus, if Wilson and Olsen were to be combined, the combination would produce an ink cartridge having a hard outer shell and a double walled ink bag with no communication passage through which the space between the inner and outer bags can communicate with the exterior of the ink cartridge. In other words, the combination still would not produce the invention claimed as the combination would still lack the “communication passage” recited in claim 1.

Moreover, even if the outer container 1102 of FIG. 10 in Wilson can be equated to the collapsible outer bag 146 of FIG. 4 in Olsen, which they don't, the combination would destroy the very purpose of both the Wilson reference and the Olsen reference, thereby destroying the motivation to combine the two references in a way the Examiner suggested.

As for Olsen, the combination would destroy the leak proof feature of Olsen. Olsen at col. 4, lines 32-38 stresses the advantage of leak proof nature of a double bag feature by stating that the outer bag and inner bag are "suitably bonded to produce a *sealed periphery* of the bag for *leak-proof* and impact-resistant containment of a printer's ink or liquid toner" (see also col. 5, lines 6-9 which stresses the redundant *seal* of the outer bags) (emphasis added). In other words, because the purpose of the double wall is to prevent leaks, there cannot be any "communication passage" that connects the space between the inner bag and outer bag to the exterior of the ink cartridge. Otherwise, the ink leaked from the inner bag can leak out through the communication passage, rather than being blocked by the outer bag.

As for Wilson, the combination would destroy the accuracy of a pressure sensor 71 which is a very important feature for Wilson. In Wilson, the pressure sensor 71 is used to sense an ink-low condition by measuring the difference in pressure in the unoccupied portion 1103b from that of the ink outlet port 1110 (see col. 5, lines 20-46). If the rigid casing 1102 is replaced by a flexible outer bag 146 of Olsen, as the Examiner argues, then the pressure sensor 71 will not be able to accurately detect the pressure in the unoccupied portion 1103b as the flexible outer bag 146 is liable to expand and contract, for example, from temperature variations. Without the accurate reading of pressure, the Wilson device in combination with Olsen will not be able to reliably determine the ink-low condition, thereby destroying the very feature that was considered to be the invention in Wilson.

Therefore, the combination as the Examiner suggested would destroy the leak-proof feature of Olsen and the accurate reading of an ink-low condition of Wilson. Accordingly, each reference appears to teach away from being combined with the other reference.

Moreover, there is no motivation to combine the two references. In the Action, the Examiner accepts that Wilson does not disclose the outer bag which is formed of a flexible sheet and then relies on Olsen as disclosing that its outer bag (146) is formed of a flexible sheet. The Examiner asserts that it would have been obvious to a person of ordinary skill in the art to utilize an outer bag made of a flexible sheet in Wilson's invention.

As apparent from Figs. 6 and 7 and as described at column 3, line 63 through column 4, line 2 in Wilson, the ink container 200 of Wilson is formed by attaching the leading end cap 1104 and the trailing end cap 1106 to the leading end and the trailing end of the outer container 1102, respectively. If the rigid outer container 1102 of Wilson is replaced with the outer bag 146 of Olsen made of a flexible sheet, as asserted by the Examiner, it would be practically impossible to attach the caps 1104, 1106 to the outer container 1102. Accordingly; there is no motivation to replace the rigid outer container 1102 of Wilson with the flexible outer bag 146 of Olsen.

As shown in Fig. 5 of Wilson, the ink container 200 (110-116) of Wilson is inserted into the ink supply station 100 of the printer/plotter 50 in the horizontal direction. If the rigid outer container 1102 of Wilson were replaced with the flexible outer bag 146 of Olsen, and the ink container 200 were used without attaching, thereto, the leading end cap 1104 and the trailing end cap 1106, the ink container 200 could not be completely inserted within the ink supply station 100. This is because the trailing end of the ink container 200 is given by the flexible outer bag 146, in place of the trailing end cap 1106 to be attached to the trailing end of the ink container 200. Accordingly, if the trailing end of the ink container 200 is pushed into the ink supply station 100, the flexible outer bag 146 is merely deformed and cannot be completely inserted within the ink supply station 100. Where the ink container 200 cannot be inserted completely within the ink supply station 100, it is apparent that connection failure will be caused between the ink container 200 and the printer/plotter 50. Therefore, there is no motivation to replace the rigid outer container 1102 of Wilson with the flexible outer bag 146 of Olsen.

For these reasons, applicant submits that claim 1 is distinguishable over the cited references. Applicant submits that dependent claims 4-6, 14, 16-19, 21 and 22 are also patentable by virtue of their dependency from independent claim 1.

The Examiner rejected claims 2, 3, 9-11, 13 and 20 under 35 U.S.C. Section 103(a) as being obvious over Wilson as modified by Olsen and further in view of Dowell (US Patent No. 6508545). Claims 2, 3, 9-11, 13 and 20 are all dependent claims depending from independent claim 1. By virtue of their dependency from independent claim 1, applicant respectfully submits that those dependent claims are patentable.

The Examiner rejected claims 7, 8 and 12 under 35 U.S.C. Section 103(a) as being obvious over Wilson as modified by Olsen and further in view of Perkins (US Patent No. 6715864). Claims 7, 8 and 12 are all dependent claims depending from independent claim 1. By

virtue of their dependency from independent claim 1, applicant respectfully submits that those dependent claims are patentable.

The Examiner also rejected claim 12 under 35 U.S.C. Section 103(a) as being obvious over Wilson as modified by Olsen and Dowell, and further in view of Perkins. Claim 12 depends from independent claim 1. By virtue of its dependency from independent claim 1, applicant respectfully submits that dependent claim 12 is patentable.

The Examiner also rejected claim 15 under 35 U.S.C. Section 103(a) as being obvious over Wilson as modified by Olsen, and further in view of Presnick (US Patent No. 3730240). Claim 15 depends from independent claim 1. By virtue of its dependency from independent claim 1, applicant respectfully submits that dependent claim 15 is patentable.

Finally, the Examiner rejected claims 23 and 24 under 35 U.S.C. Section 103(a) as being obvious over Wilson as modified by Olsen and Presnick. Applicant submits that for the similar reasons as discussed above, claim 23 is patentable. Specifically, a person of ordinary skill in the art would equate the outer container 1102 in Wilson to the protective outer shell 148 in Olsen, not to the collapsible outer bag 146 in Olsen because they are both rigid casings to protect the ink bags. Thus, if Wilson and Olsen were to be combined, the combination would produce an ink cartridge having a hard outer shell and a double walled ink bags that are sealed with no way of sucking air out of the space between the two bags.

The Examiner cited Presnick as teaching an ink package in which the space is evacuated to a reduced pressure. Applicant respectfully disagrees. The language “reduced pressure” refers to pressure that is lower than an atmospheric pressure (e.g., in a vacuum or partial vacuum). By contrast, Presnick teaches only that the two bags can be collapsible. That means that the pressure in the space between the two bags is *at atmospheric pressure*, not below atmospheric pressure. In other words, there is no vacuum or partial vacuum in the space. For these reasons, applicant submits that claim 23 and claim 24 depending from 24 are also patentable.

Based upon the above remarks, Applicant respectfully requests reconsideration of the elected claims. Should the Examiner feel that a telephone conference with Applicant's attorney would expedite the prosecution of this application, the Examiner is urged to contact him at the number indicated below.

Respectfully submitted,

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